

OIL ANALYSIS REPORT

McCLUNG-LOGAN

EQUIPMENT COMPANY, INC.

WEAR SEVERE CONTAMINATION SEVERE FLUID CONDITION NORMAL



VOLVO EC480E 310963

GEAR OIL SAE 80W140 (--- GAL)

RECOMMENDATION

We advise that you check all areas where dirt can enter the system. We recommend that you drain the oil from the component if this has not already been done. We advise that you inspect for the source(s) of wear. We recommend an early resample to monitor this condition.

WEAR

Gear wear is indicated.

CONTAMINATION

Elemental levels of silicon (Si) and aluminum (Al) indicate aluminasilicate (coarse dirt) ingress.

FLUID CONDITION

The oil is no longer serviceable due to the presence of contaminants.

Test	UOM	Method	Limit/Abn	Current	History1	History2
Sample Number		Client Info		ML0000966		
Sample Date		Client Info		22 Apr 2024		
Machine Age	hrs	Client Info		8775		
Oil Age	hrs	Client Info		8775		
Filter Age	hrs	Client Info		0		
Oil Changed		Client Info		N/A		
Filter Changed		Client Info		N/A		
Sample Status				SEVERE		
Iron	ppm	ASTM D5185m	>1200	A 2570		
Chromium	ppm	ASTM D5185m	>20	<u> </u>		
Nickel	ppm	ASTM D5185m	>5	<1		
Titanium	ppm	ASTM D5185m		9		
Silver	ppm	ASTM D5185m	100	0		
Aluminum	ppm	ASTM D5185m	>100	<mark>-</mark> 53		
Lead	ppm	ASTM D5185m	>50	0		
Copper	ppm	ASTM D5185m	>50	2		
Tin	ppm	ASTM D5185m	>5	<1		
Vanadium	ppm	ASTM D5185m		<1		
White Metal	scalar	*Visual	NONE	NONE		
Yellow Metal	scalar	*Visual	NONE	NONE		
Silicon	scalar ppm	*Visual ASTM D5185m	>100	NONE 374		
Silicon	ppm	ASTM D5185m	>100	4 374		
Silicon Potassium	ppm	ASTM D5185m ASTM D5185m	>100 >20	▲ 374 16		
Silicon Potassium Water	ppm ppm	ASTM D5185m ASTM D5185m WC Method	>100 >20 >0.25	▲ 374 16 NEG		
Silicon Potassium Water Silt	ppm ppm scalar	ASTM D5185m ASTM D5185m WC Method *Visual	>100 >20 >0.25 NONE	 374 16 NEG NONE 		
Silicon Potassium Water Silt Debris	ppm ppm scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual	>100 >20 >0.25 NONE NONE	 374 16 NEG NONE NONE 		
Silicon Potassium Water Silt Debris Sand/Dirt	ppm ppm scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual	>100 >20 >0.25 NONE NONE	 374 16 NEG NONE NONE NONE 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual	>100 >20 >0.25 NONE NONE NONE NORML	 374 16 NEG NONE NONE NONE NORML 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual	>100 >20 >0.25 NONE NONE NONE NORML NORML	 374 16 NEG NONE NONE NORE NORML 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor	ppm ppm scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>100 >20 >0.25 NONE NONE NORML NORML >0.25	 374 16 NEG NONE NONE NORML NORML NEG 2 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m	>100 >20 >0.25 NONE NORME NORML >0.25	 374 16 NEG NONE NORML NORML NEG 2 50 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium	ppm ppm scalar scalar scalar scalar scalar scalar	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NONE NORML NORML >0.25	 374 16 NEG NONE NONE NORML NORML NEG 2 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm ppm scalar scalar scalar scalar scalar scalar ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NORME NORML >0.25	 374 16 NEG NONE NONE NORML NORML NEG 2 50 5 <1 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NORME NORML >0.25 400 200 12	 374 16 NEG NONE NORML NORML NEG 2 50 5 <1 22 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum	ppm ppm scalar scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NONE NORML NORML >0.25	 374 16 NEG NONE NONE NORML NORML NEG 2 50 5 <1 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NORME NORML >0.25 400 200 12	 374 16 NEG NONE NORML NORML NEG 2 50 5 <1 22 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NORM NORML >0.25 400 200 12 12 12 150 1650	 374 16 NEG NONE NONE NORML NORML NEG 2 50 5 <1 22 11 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NONE NORML NORML >0.25 400 200 12 12	 374 16 NEG NONE NONE NORML NORML NEG 2 50 5 <1 22 11 94 		
Silicon Potassium Water Silt Debris Sand/Dirt Appearance Odor Emulsified Water Sodium Boron Barium Molybdenum Manganese Magnesium Calcium	ppm ppm scalar scalar scalar scalar scalar ppm ppm ppm ppm ppm ppm	ASTM D5185m ASTM D5185m WC Method *Visual *Visual *Visual *Visual *Visual *Visual ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m ASTM D5185m	>100 >20 >0.25 NONE NORM NORML >0.25 400 200 12 12 12 150 1650	 374 16 NEG NONE NORML NORML NEG 2 50 5 <1 22 11 94 692 		

Submitted By: Service - William Brittle



WILLIAM HAZEL Laboratory : WearCheck USA - 501 Madison Ave., Cary, NC 27513 Sample No. Received PO BOX 600 : ML0000966 : 24 Apr 2024 Lab Number : 06159485 Tested CHANTILLY, VA : 25 Apr 2024 Unique Number : 10994908 Diagnosed : 26 Apr 2024 - Jonathan Hester US 20153 Test Package : CONST Contact: SERVICE MANAGER Certificate L2367 To discuss this sample report, contact Customer Service at 1-800-237-1369. jimmy_elswick@wahazel.com * - Denotes test methods that are outside of the ISO 17025 scope of accreditation. T: (703)378-8300 Statements of conformity to specifications are based on the simple acceptance decision rule (JCGM 106:2012) F: